

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-6 (canceled)

Claim ¹~~7~~ (previously presented): A control unit comprising:

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a temporally discrete dynamic fuzzy logic control element having at least one integrating transfer characteristic and/or differentiating transfer characteristic and comprising a memory device to store a current internal state variable of said fuzzy logic control element, said current internal state variable based on fuzzy logic conclusions.

Claim ²~~8~~ (currently amended): A control unit as in claim ~~1-7~~¹, wherein said fuzzy logic control element updates the current internal state variable based on an input variable and the current internal state variable and generates an output variable such that said fuzzy logic control element has at least one integrating transfer characteristic and/or differentiating transfer characteristic.

Claim ³~~9~~ (currently amended): A control unit as in claim ~~9-7~~¹, wherein said fuzzy logic control element further comprises at least one first static fuzzy logic device to update the current internal state variable of the fuzzy logic control element based on fuzzy logic conclusions.

Claim ⁴10 (previously presented): A control unit as in claim ¹7, wherein said fuzzy logic control element further comprises at least one second static fuzzy logic device to update an output variable of the fuzzy logic control element based on fuzzy logic conclusions.

Claim ⁵11 (previously presented): A control unit as in claim ¹7, wherein said current internal state variable of said fuzzy logic control element is based on a processing state in at least one succession of processing states, and wherein said fuzzy logic control element changes from one processing state to another processing state in temporally discrete fashion upon updating of said current internal state variable.

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Claim ⁶12 (currently amended): A method of regulating a technical process comprising utilizing the control unit of claim ¹1.

Claim ⁷13 (previously presented): A control unit comprising:
means for combining a guide variable and a feedback variable to obtain an input variable; and
a fuzzy logic control element comprising:
a first fuzzy logic device receiving said input variable from said means for combining and a current internal state variable of said fuzzy logic control element and generating a next internal state variable of said fuzzy logic control element on a temporally discrete basis based on fuzzy logic and at least one integrating transfer characteristic and/or differentiating transfer characteristic; and

a memory device receiving said next internal state variable of said fuzzy logic control element from said first fuzzy logic device and providing said current internal state variable of said fuzzy logic control element to said first fuzzy logic device.

⁸ Claim 14 (previously presented): A control unit as in claim ⁷13, wherein said first fuzzy logic device comprises processing states identifying a transition from said current internal state variable to said next internal state variable, wherein said transition is based on fuzzy logic conclusions and occurs on a temporally discrete basis, wherein said current internal state variable corresponds to one of said processing states, wherein said next internal state variable corresponds to said one or another of said processing states.

01 ⁹ Claim 15 (previously presented): A control unit as in claim ⁷13, wherein fuzzy logic control element further comprises:
a second fuzzy logic device receiving said input variable from said means for combining and said current internal state variable of said fuzzy logic control element from said memory device and generating an output variable for said control unit based on fuzzy logic and at least one integrating transfer characteristic and/or differentiating transfer characteristic.

¹⁰ Claim 16 (previously presented): A method for controlling comprising the steps of:
receiving a guide variable;
receiving a feedback variable;
combining said guide variable and said feedback variable to obtain an input variable;

generating a next internal state variable on a temporally discrete basis based on said input variable, a current internal state variable, fuzzy logic, and at least one integrating transfer characteristic and/or differentiating transfer characteristic;
storing said next internal state variable; and
providing said current internal state variable based on stored next internal state variable;
generating an output variable for controlling based on said current internal state variable.

C1 Claim ¹⁷17 (previously presented): A method as in claim ¹⁶16, wherein the step of generating said next internal state variable is based on processing states identifying a transition from said current internal state variable to said next internal state variable, wherein said transition is based on fuzzy logic conclusions and occurs on a temporally discrete basis, wherein said current internal state variable corresponds to one of said processing states, wherein said next internal state variable corresponds to said one or another of said processing states.

Claim ¹⁸18 (previously presented): A method as in claim ¹⁷17, wherein the step generating said output variable for controlling is based on said current internal state variable and said input variable.